

WHAT IS CLAIMED IS:

1. A direct injection diesel engine comprising:

a fuel injection element for injecting fuel directly to each combustion chamber of a plurality of cylinders arranged in a row; and

a cylinder head having first and second intake openings and first and second intake ports formed therein, the first and second intake openings being arranged along the row direction of the cylinders and opened to the corresponding combustion chambers on one side of the row of cylinders, and the first and second intake ports communicating with the first and second intake openings, respectively, wherein

the first intake port for each cylinder extends from the corresponding first intake opening in a direction generally perpendicular to the row direction; and

the second intake port for each cylinder is directed to a flow direction of a swirl generated in the corresponding combustion chamber.

2. A direct injection diesel engine according to claim 1, wherein the second intake port extends along a direction generally parallel to the row direction.

3. A direct injection diesel engine according to claim 1, wherein the first and second intake ports are formed straight.

4. A direct injection diesel engine according to claim 1, wherein the first intake opening is located away from a cylinder wall surface of the corresponding cylinder.

5. A direct injection diesel engine according to claim 1, wherein

the cylinder head is fixed by use of cylinder head bolts disposed on a first side of the row of cylinders and cylinder head bolts disposed on a second side of the row of cylinders; and

the second intake port extends toward the second intake opening from a space between two cylinder head bolts disposed on the first and second sides, respectively, of the row of cylinders.

6. A direct injection diesel engine according to claim 1, wherein the first intake port is formed parallel to a glow plug mounted on the cylinder head as viewed from the center axis of the corresponding cylinder.

7. A direct injection diesel engine according to claim 1, wherein the fuel injection element injects pressurized fuel into the combustion chamber.